

December 21, 2010

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554
Via Electronic Filing

Re: *Ex Parte* Presentation, WC Docket No. 07-245, GN Docket No. 09-51

Dear Ms. Dortch:

On December 21, 2010, Brian Regan and the undersigned of the DAS Forum, a membership section of PCIA—The Wireless Infrastructure Association met with Amy Goodman, Marv Sacks, Al Lewis, and Richard Kwiatkowski of the Wireline Competition Bureau, and Dan Abeyta of the Wireless Telecommunications Bureau.

The DAS Forum discussed the integral role of wireless infrastructure—specifically Distributed Antenna Systems (“DAS”)—in the effort to achieve the Commission’s broadband and wireless goals. Consistent with the DAS Forum’s filings on the record in this proceeding, the DAS Forum urged the Commission to give meaning to the statutory rights of wireless pole attachers in part by ensuring that wireless attachers are guaranteed the regulated pole attachment rate for the service they are providing. The DAS Forum acknowledged that to the extent that a wireless attacher occupies more than one-foot of usable space, the wireless attacher would have to pay the regulated rate adjusted for the amount of useable space occupied. The DAS Forum explained that the record contains evidence of utility pole owners charging monopoly rates for wireless attachments that far exceed the regulated rates afforded to other attachers, and urged the Commission to resolve this deployment barrier by ensuring that wireless attachers are afforded regulated rates. The attached slides, in the record from a DAS Forum *ex parte* on July 24, 2008 in WC Docket No. 07-245, were circulated among FCC staff during the meeting to provide pictorial examples of DAS attachments.

Pursuant to Section 1.1206 of the Commission’s rules, a copy of this letter will be filed via ECFS with your office. Please do not hesitate to contact the undersigned with any questions.

Sincerely,



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Cc: Dan Abeyta, Amy Goodman, Richard Kwiatkowski, Al Lewis, Marv Sacks



Distributed Antenna Systems (DAS) 101

Overview of the DAS Forum

- Mission:
 - The DAS Forum (a membership section of PCIA-The Wireless Infrastructure Association) is a broad-based non-profit organization, dedicated to the development of the distributed antenna system (DAS) component of the nation's wireless network.
- About The DAS Forum:
 - Founded in 2006, The DAS Forum is the only national network of leaders focused exclusively on shaping the future of DAS as a viable complement to traditional macro cell sites and a solution to the deployment of wireless services in challenging environments.
 - DAS Forum members own and manage all of the neutral host and many of the carrier-owned outdoor DAS installations in the U.S.
 - The DAS Forum's membership includes all of the major outdoor DAS infrastructure providers, as well as major carriers, equipment manufacturers, and professional services firms.

DAS 101

- What is DAS?
- History of DAS
- Benefits of DAS
- Applications of DAS
- Pole Attachment Issues
- Regulatory/Policy Issues



What is DAS?

A distributed antenna system (DAS) is a network of spatially-separated antenna nodes connected to a common source via a transport medium that provides wireless service within a geographic area or structure. DAS antenna elevations are generally at or below the clutter level of nearby trees and buildings.

History of DAS

- Fiber was used to carry RF signals to discrete modules in the early Phased Array Radar systems designed in the 1970s.
- Saleh proposed a commercial antenna system in an IEEE paper in 1987.
- DAS networks were first commercially viable in the late 1980s with the advent of optical fiber installed as a transport medium.
- Allen Telecom and AT&T introduced a commercial analog fiber DAS network in 1989.
- ADC introduced an outdoor digital DAS network in 1993.
- Today, DAS networks are deployed across the country. The visual unobtrusiveness of these networks means that many networks are not noticeable to the casual observer.



Benefits of DAS

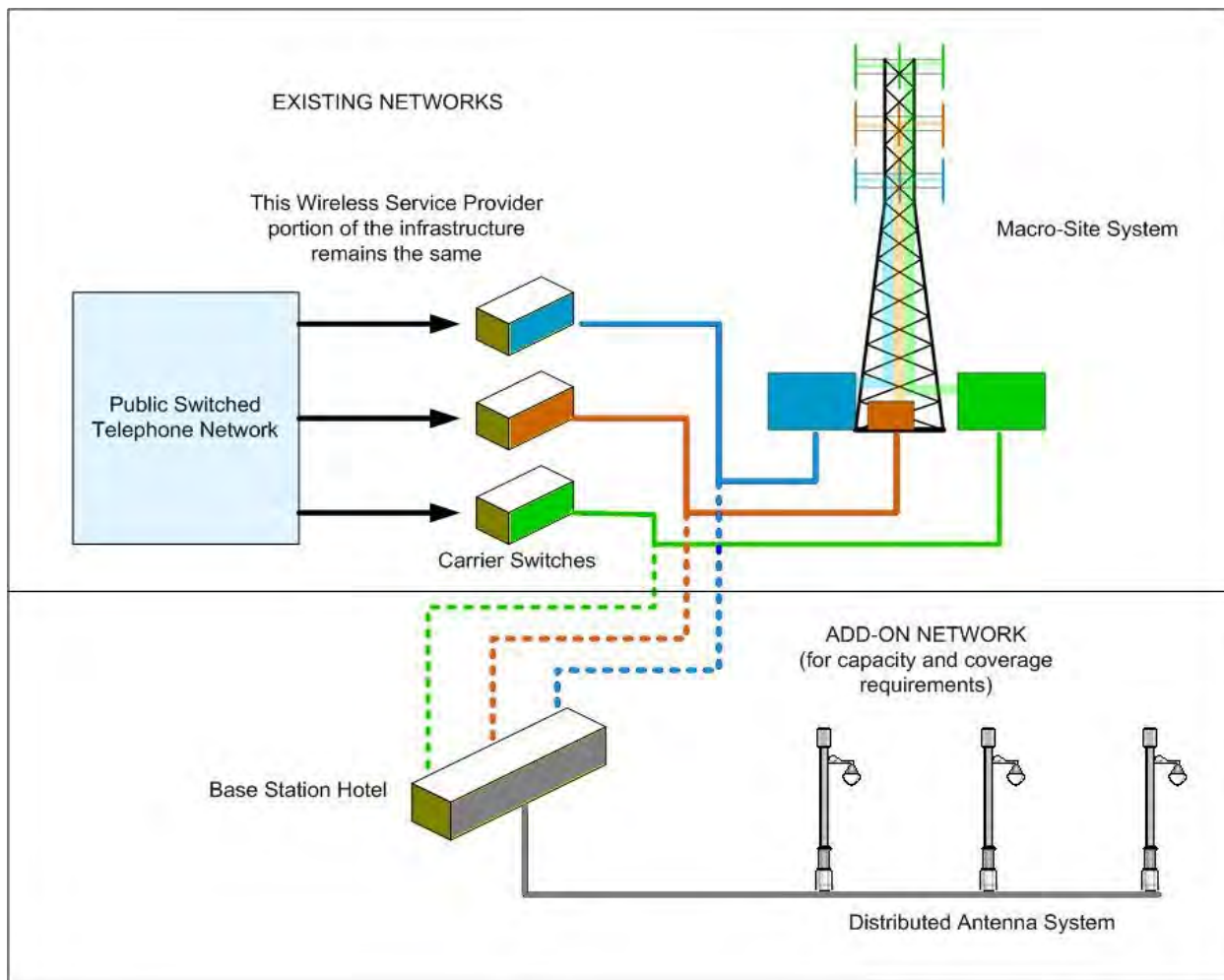
- **Coverage:** DAS architecture provides coverage in areas that cannot be effectively addressed with traditional sites.
- **Capacity:** DAS can closely align capacity to actual market requirements, managing available radio resources.
- **Spectrum:** DAS uses available frequency spectrum efficiently through multiple low-power transmission points.
- **Interference:** DAS reduces interference through low radiation centers and lower output power.
- **Data:** DAS provides better data throughput given signal strength and proximity of transmission points to user equipment.
- **Scalability:** DAS is a scalable network that can meet future capacity requirements, or additional carriers, by adding additional nodes.
- **Adaptability:** DAS can respond to market dynamics, equipment architecture changes and new technologies.

Radio-Frequency and Equipment Components of DAS

- DAS distributes radio-frequency signals from a central location to remote antennas. This allows the antennas to be very simple, as they only require conversion devices and amplifiers.
- A simple, remote antenna only requires a small equipment box (for easier and more flexible installation).
- Centralization means equipment sharing, dynamic resource allocation and more effective management.



Comparing DAS to “Macro” Sites



200-foot tower with multiple equipment sheds (one per carrier)

40-foot light poles (existing) with one “hotel” housing multiple carriers’ equipment

DAS Networks Nation-Wide



DAS Applications: In-Building Systems

- DAS is ideal for large buildings (e.g., malls, convention centers)
- DAS enables easier installation through small nodes in roof/ceiling



DAS Applications: Canyon Coverage

- Pole attachment on Pacific Coast Highway, north of Los Angeles
- Dual-directional antennas above communications space



DAS Applications: Dense Urban Area

- Network deployed on various platforms
- Dense construction in surrounding areas



DAS Applications: Stadium coverage

- Comerica Park (Detroit Tigers stadium)
- DAS antennas placed in stadium lights
- Antenna placement reaches wireless users in stadium



DAS is Tough!!

- This DAS network remained operational after a rainstorm and mudslide in Malibu, CA.

- DAS pole attachments meet National Electric Safety Code standards.



Contractual & Regulatory Challenges for DAS Deployment

- Pole attachment agreements (access and rates)
- Pole attachment regulations (FCC and certified states)
- Franchising and certification
- Local zoning and entitlements



Pole Attachment Issues

The FCC's current rules encouraging good-faith negotiation are thwarted by some pole owners that refuse access to poles, or that charge unreasonable attachment rates.

Access

- Some electric utilities refuse to allow DAS attachments on utility poles.
- Some pole owners demand unreasonable terms & conditions in pole attachment agreements (e.g., too-short terms, restrictive make-ready provisions).

Rates

- Some utility companies require the acceptance of pole attachment rates on a “take it or leave it” basis.
- Wireless attachers often demand unlawful “market rates” of up to *two to one hundred-twenty times greater than the regulated telecommunications rate*.

Pole Attachment Solutions

The FCC can effectuate its policy goals of enabling robust wireless deployment through providing for pole attachment reforms, including the following:

- Cost-based rate structure;
- Confirmation of right of wireless attachers to place equipment in right-of-way and antennas at pole top according to reasonable terms and conditions; and
- Clarification of safety standards and make-ready timelines.

Pole Attachments (Certified States)

PCIA and The DAS Forum urge more equitable pole access at all levels of government. Recent examples include the following:

- **CA PUC** Rule-Making on pole-top antenna safety/separation issues
- **CT DPUC** docket opening on access, make-ready and rates (proposed)
- Outreach to **VT DPS** re: engineering issues, role of pole attachments in statewide wireless/broadband initiative
- Legislative testimony supporting continuation of **WA** policy encouraging pole access for wireless attaches.

State Certification Issues

- In *National Cable & Telephone Ass'n v. Gulf Power* (534 U.S. 327, 340-41(2002)), the Court determined that attachments by wireless carriers fall within the definition of “telecommunications services.”
- Further, the federal pole attachment statute defines a “pole attachment” to include “any attachment...by a provider of telecommunications service.” 47 U.S.C. 224(a)(4)
- Clarification of wireless carriers’ status as valid pole attachers provides for non-discriminatory policy and will enhance wireless competition .
- CMRS providers attaching to poles should not be required to obtain a Certificate of Public Convenience and Necessity (CPCN).

Zoning/Franchising Issues

- Most local zoning ordinances do not address DAS networks, so the application of local regulation to DAS is often unclear.
- Some DAS providers obtain local entitlements or franchises through the right-of-way process.
- Others submit applications as collocations on existing structures.
- While jurisdictions tend to look at DAS favorably because of its low-profile visual design and use of existing “vertical real estate,” many of the wireless siting challenges faced when building “macro” sites are still present when deploying DAS.
- For this reason, FCC standardization of local zoning standards would effectuate development of this technology.

The Outlook for DAS is Influenced by FCC Policy

DAS is a viable alternative to traditional wireless sites. It provides an excellent platform for the wireless services consumers demand.

- The FCC can promote the deployment of DAS and other wireless infrastructure through policies that remove unreasonable barriers to market entry.
- Clarification of pole attachment access and rates would provide certainty to DAS providers in a crucial and complicated stage of the deployment process.
- DAS plays a role in the FCC's overall policy goals of encouraging deployment of next-generation wireless communications to our nation.